

Amendments to the Claims:

Please amend the claims as shown.

1 – 10. (canceled)

11. (previously presented) A wind power unit and a flow field, comprising:
a mast positionable to receive a laminar flow along a path having a direction generally transverse to a direction along which the mast has a variable width, the mast including a maximum width measurable in a direction transverse to the laminar flow;
a nacelle associated with the mast;
a rotor associated with the nacelle;
a plurality of rotor blades, at least one rotor blade having a plurality of recesses each having a shape in accord with the shape of a hemisphere, each recess positioned the same distance from all adjacent recesses, to improve flow arranged on the rotor blades approximately in the region between the transition point between laminar and turbulent flow and the final edge of the rotor blade and the shape and configuration of the recesses are designed such that, as the air sweeps past a recess, alternating flow eddies form in the recess that assist with continued laminar flow of the air while also reducing flow resistance along the surface relative to flow in the absence of the recesses,
the mast characterized by a transition point along the flow path wherein a flow portion:
(i) has predominantly laminar characteristics when travelling toward the transition point; and (ii) is characterized by turbulent flow when travelling away from the transition point, and
wherein the transition point is positioned relative to a second point on the mast coinciding with the maximum width such that the flow portion first passes along the second point before passing the transition point.

12. (previously presented) The wind power unit according to claim 11, wherein the recesses are shaped as hemispheres and are also arranged on the mast.

13 - 14. (canceled)

15. (previously presented) The wind power unit according to claim 11, wherein the recesses are arranged in rows configured as an array having design such that, as the air sweeps past the recesses, multiple flow eddies form in multiple ones of the recesses that assist with passage of the air flow with reduced resistance, the array being operatively positioned in a region on the surface along which the air flow passes to cause, in the presence of flowing air, a point along the direction of the air flow at which transition between laminar and turbulent flow occurs under the force of air flow, to be displaced in the direction of the air flow, so that resistance to the air flow is reduced.

16. (previously presented) The wind power unit according to claim 15, wherein the rows are arranged offset with respect to each other.

17. (previously presented) The wind power unit according to claim 11, wherein the recesses are configured on a flat support material, which can be fixed on or to the wind power unit.

18. (previously presented) The wind power unit according to claim 17, wherein the support material is a film.

19. (previously presented) The wind power unit according to claim 11, wherein a structure and profiles of the rotor blades are tailored to a stall speed as modified by the recesses.

20. (previously presented) The wind power unit according to claim 11, wherein control software is tailored to a stall speed as modified by the recesses.

21. (previously presented) The wind power unit according to claim 11, wherein a component surface is not susceptible to dirt and ice.

22. (currently amended) A wind power unit comprising:
a mast;
a nacelle associated with the mast;
a rotor associated with the nacelle; and
a plurality of rotor blades, wherein the mast and rotor each include along a surface thereof a plurality of recesses each having a shape corresponding to that of a countour of a hemisphere, each recess positioned the same distance from all adjacent recesses, wherein the shape and configuration of the recesses are designed such that as the air sweeps past a recess, one or more eddy flows form in the recess that assist the passage of the air at reduced resistance relative to conditions in the absence of the recesses, and wherein a pattern of the alternating flow eddies develop over the surface, extending from one recess to a next recess in the array as a function of air flow speed.

23. (previously presented) The unit and flow field of claim 22 wherein one or more of the rotor blades includes a plurality of recesses shaped as hemispheres each positioned the same distance from all adjacent hemisphere shaped recesses.

24. (previously presented) The unit and flow field of claim 22 wherein the recesses along the mast surface are configured to reduce the region of turbulent flow so that turbulence behind the unit is smaller, having less influence on any wind power machines positioned behind the unit.

25. (previously presented) A wind power unit comprising:

a mast;

a rotor; and

a plurality of rotor blades configured to sweep past the mast when exposed to a force or pressure of air flowing in a direction extending toward and past the blades and mast, wherein the mast or one of the plurality of rotor blades includes along a surface thereof a plurality of recesses each having a shape in accord with at least a sector of a hemisphere, each recess positioned the same distance from all adjacent recesses, the recesses configured as an array of design such that, as the air sweeps past the recesses, flow eddies form in the recesses that assist with the passage of air flow at reduced resistance relative to flow in the absence of such recesses, the array being operatively positioned in a region on the surface along which the air flow passes to cause, in the presence of flowing air, a point along the direction of the air flow at which transition between laminar and turbulent flow occurs under the force of air flow, to be displaced in the direction of the air flow, so that resistance to the air flow is reduced.

26. (previously presented) The wind power unit of claim 25 wherein the provision of recesses with shapes in accord with at least a sector of a hemisphere enables the array to support a pattern of clockwise and counterclockwise flow eddies which alternate over time.

27. (previously presented) The wind power unit of claim 25 wherein, when air flows across the surface, a pattern of the alternating flow eddies develops over the surface, extending from one recess to a next recess in the array as a function of air flow speed.

28. (previously presented) The wind power unit of claim 25 wherein the recesses are each in the shape of a hemisphere.

29. (previously presented) The wind power unit of claim 25 wherein the mast includes a major surface along which the plurality of recesses are formed.

30. (previously presented) The wind power unit of claim 25 wherein a film with the recesses formed therein is positioned on the outside of the mast.